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ORIGINAL

September 22, 1999

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Magalie Roman Salas
Secretary, Room TW-A325
Federal Communications Commission
The Portals, 445 Twelfth Street, SW
Washington, DC 20554

Re: **In the Matter of Low-Volume Long Distance Users, CC Docket No. 99-249**

Dear Ms. Salas:

Enclosed herewith for filing are the original and four (4) copies of MCI WorldCom's Comments regarding the above-captioned matter.

Please acknowledge receipt by affixing an appropriate notation on the copy of the MCI WorldCom Comments furnished for such purpose and remit same to the bearer.

Sincerely yours,

Don Sussman

Don Sussman (MLB)

Enclosure
DHS

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:		
Low-Volume Long Distance Users	)	CC Docket No. 99-249
Notice of Inquiry	)	

MCI WORLDCOM, INC. COMMENTS

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September 22, 1999

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Summary

The Commission's concern that certain flat-rated charges on single-line residential and business customers are not benefitting all segments of the mass market is misplaced. Even the most casual observer of long distance pricing knows that competition in the long distance market is producing rapid price decreases to the benefit of all consumers. Per minute prices for presubscribed long distance services, and rates for dial-around services have decreased at an astonishing pace. Long distance rates are the lowest they have ever been, consumer choice is abundant, and innovation is rampant.

Even if these price decreases weren't as evident, as a matter of public policy two-part pricing structures that reflect both a per minute and flat fees are economically efficient and represent rational pricing. Flat fees, even though they may raise the expenditures of some consumers, are required to reach the twin goals stated in the Commission's Access Reform docket: a) cost-causative pricing and b) reduction of subsidies from high to low volume users. Two part pricing is entirely consistent with a competitive outcome given the significant, and increasing, fixed costs incurred by long distance carriers.

The Commission's efforts should be focused on ensuring that vibrant competitive forces, which exist in the long distance market, develop in all telecommunications market. The largest set of issues facing the Commission today is the lack of local competition. Local access charges remain billions of dollars above economic cost. The Commission should terminate this docket, and re-direct all of its resources to opening up local markets and ensuring that access rates are based on forward-looking economic costs. A fully competitive telecommunications industry is the best way to serve consumers.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:		
Low-Volume Long Distance Users	)	**CC Docket No. 99-249**
Notice of Inquiry	)	

MCI WORLDCOM, INC. COMMENTS

I. Competitive Long Distance Market Produces Prices That Benefit Consumers

On July 20, 1999, the Commission released the above-captioned Notice of Inquiry (Notice) seeking comment "on the impact of certain flat-rated charges on single-line residential and business customers who make few, or no, interstate long-distance calls."[1] The Commission's interest in low-volume long distance users stems from its desire to "ensure that all Americans benefit from a robust and competitive communications marketplace."[2] The Commission's concern that certain flat-rated charges on single-line residential and business customers are not benefitting all segments of the mass market is misplaced. Even the most casual observer of long distance pricing knows that competition in the long distance market is producing rapid price decreases to the benefit of all consumers. Per minute prices for presubscribed long distance

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[1] In the Matter of Low-Volume Long Distance Users, Notice of Inquiry, CC Docket No. 99-249, released July 20, 1999 (Notice).

[2] Id at ¶ 1.

services, and rates for dial-around services have decreased at an astonishing pace. Long distance rates are the lowest they have ever been, consumer choice is abundant, and innovation is rampant. All consumers are able to reap the benefits of competition.

As the Commission recently noted, there are more than 600 carriers in the United States that provide long distance services.[3] When these statistics are coupled with the fact that last year over 26 million customers were estimated to have changed long distance service providers,[4] it is clear that not only do customers have a choice of long distance providers, but they pay close attention to the products, services, and prices offered by long distance providers and exercise their informed choice by switching carriers. As a result, long distance providers today spend millions of dollars on advertising, marketing, customer service, product development, and competitive pricing to ensure that their products will be the most appealing products and services in the marketplace.

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[3] In the Matter of Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc., Memorandum Opinion and Order, CC Docket No. 97-211, released September 14, 1998, at ¶32. Additionally, as the Commission points out in its report entitled "Long Distance Market Shares, Second Quarter, 1998," based on the Hirschman-Herfindahl Indices (HHI), market concentration within the long distance industry has fallen dramatically since 1984, from 8,155 to 2,508 when based on long distance revenue. Long Distance Market Shares, Second Quarter, 1998, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, September 1998, at 10. The Hirschman-Herfindahl Indices (HHI) are the sum of squares of the market shares of the companies in a particular industry and is used by the Department of Justice to measure changes in industry concentration resulting from horizontal mergers or acquisitions.

[4] According to The Yankee Group's 1998 Technologically Advanced Survey (TAS), September 1998.

The Hill/Beard Study, submitted to the Commission in the Spring of 1999,[5] explains that it is likely that long distance carriers operating in today's extremely competitive environment reduce their rates in advance of expected cost declines.[6] The Hill/Beard Study explains that IXC customers understand that their relationship with their long distance service provider may last for months or years.[7] Likewise, long distance carriers recognize that customer relationships are often long term.[8] Since customers sign up for long distance service over a nontrivial time period, and access reductions are known in advance, IXCs can, and appear to, reduce prices before access charge reductions take place in order to attract new buyers.[9] The Hill/Beard Study clearly demonstrates that MCI WorldCom's long distance rates declined more than access charges between January 1997 and June 1998, despite the fact that other significant MCI WorldCom costs increased during the same time frame.[10]

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[5] MCI WorldCom submitted a study by R. Carter Hill (LSU) and T. Randolph Beard (Auburn) to the Commission in the Spring of 1999 to refute a seriously flawed NERA study looking at IXC pricing activity between January 1997 and June 1998. The Hill/Beard study found that NERA manipulated data and made conclusions based on selective data points in drawing the inaccurate conclusion that prices did not decrease as fast as access charges did. The Hill/Beard Study is based on publicly available data (and is available on line at :www.ec-group.net/download.

[6] Hill Beard Study at v.

[7] Hill/Beard Study at 6.

[8] Id.

[9] Id.

[10] The Hill/Beard study shows that average revenue per minute (ARPM) for MCI WorldCom declines over the period, exceeding access reductions (including PICCs), in January 1997/June 1998. The difference is statistically significant. The study also explains that ARPM is the correct measure because it reflects changes in MCI WorldCom's costs and revenues proportionally.

Beginning in January of 1998, observers of long distance pricing witnessed unique changes in the long distance industry, reflecting not only actual and anticipated access reductions and strong competitive forces, but a change in IXCs' underlying cost structure (i.e., a shift from a per minute cost structure to a flat-rated and per minute a cost structure). IXCs began offering calling plans with flat fees and per minute rates to reflect their two part cost structure. While this move to two part pricing represents rational pricing and economically efficient recovery of IXC costs, it also benefits consumers through significantly lower long distance rates. Wall Street analysts recently have noted that long distance end users are benefitting from competition and lower access charges:

> As costs come down to provision long distance service, customers are benefitting from lower retail rates."
>
> David Barden, JP Morgan, 8/10/99

> "In the long distance business, revenue per minute has declined in real terms by 80% in the last 15 years... as access charges declined, pricing has followed."
>
> Jack Grubman, Salomon Smith Barney, 8/20/99

> "...it is striking how quickly long-distance rates have fallen. It was just in 1996 that AT&T introduced one of the first flat-rate pricing plans for 15 cents a minute, 24 hours a day."
>
> The Wall Street Journal, 8/9/99

As a result of access reductions, MCI WorldCom estimates that its new presubscribed dial-1 products alone represent over a 15 percent decline in rates relative to the previous mix of market services.[11]

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[11] MCI WorldCom agrees analysts that refute the notion that a "price war" now exists in the long distance industry.

MCI WorldCom continues to lead the industry in placing customers on low rate calling plans, with the vast majority of its residential customers on calling plans. In 1997, MCI WorldCom initiated what has become a revolution in long distance pricing by introducing "MCI 5¢ Sundays." All of our customers, without the need for electing the plan, receive a rate of 5¢ per minute all day Sunday, with no flat fee. In 1998, MCI WorldCom introduced "MCI 5¢ Saturdays," extending its low 5¢ rate to presubscribed customers placing long distance calls on Saturdays. Again, no monthly flat fee applies. Since the introduction of these calling plans, MCI WorldCom's calling volume has doubled, and customers participating in these plans experienced, on average, a 7% decline in rates. As a result, MCI WorldCom grew its residential calling plans significantly, with more than 1.5 million of its customers taking advantage of new offers, such as "MCI 5¢ Sundays" and "MCI 5¢ Saturdays." All of this was accomplished through competition in the industry, not through any regulatory mandate.

On August 8, 1999, MCI WorldCom introduced "MCI 5¢ Everyday," a rate plan that charges 5¢ per minute weekday evenings, nights, and weekends, and 25¢ per minute week days from 7 a.m. to 6:59 p.m. The monthly flat fee for "MCI 5¢ Everyday" is $1.95, with a $5 minimum per month usage requirement. However, the $1.95 flat fee is applied to the $5

> "We do not believe there is a price war in long distance, we believe that there is a high level of competition as there has always been in this space... This AT&T new consumer plan (like the WorldCom plan and the Sprint plans that are in the market), takes advantage of declining access costs and attempt to stimulate volume usage during off-peak hours when networks sit." Jack Grubman, Salomon Smith Barney, 8/30/99.

A "price war " is a term used to define characteristics that do not currently exist in the long distance industry, such as when a company reduces prices below cost, response to sudden downturn in demand, and cyclical competition.

minimum, reducing the minimum usage, in effect, to just $3.05 per month. Also, MCI WorldCom introduced "MCI 5¢ Everyday Plus," a rate plan that charges 5¢ per minute weekday evenings, nights, and weekends, and only 10¢ per minute weekdays from 7 a.m. to 6:59 p.m. The monthly flat fee for "MCI 5¢ Everyday Plus" is $4.95, with no minimum usage fee. For both "MCI 5¢ Everyday" and "MCI 5¢ Everyday Plus," customers are required to sign up for the plans because flat fees do apply.

In addition to the above-mentioned presubscribed or dial-1 calling plans, MCI WorldCom has led the industry in developing and promoting dial-around (or 10-10) services, with products such as 10-10321 and 10-10220. These products make it possible for customers to shop for long distance service on a "per-call" basis. To ensure that dial around rates are among the most competitive in the industry, and in response to increased competition and lower access charges, effective June 21, 1999, MCI WorldCom reduced 10-10321 rates to 8¢ per minute for calls over ten minutes, and 16¢ per minute for calls under ten minutes. MCI WorldCom also has introduced 10-10220, offering customers up to 20 minutes for 99¢, an effective rate of less than 5¢ per minute, and 9¢ for every additional minute.

Dial around products, such as 10-10321 and 10-10220, are ideal for low volume users. These dial around products allow consumers to buy one call at a time. They are easy to try, easy to use, can be used as often, or as little, as desired, and include no additional fees or charges (such as universal fees or line items charges aimed at recovering the ILEC presubscribed interexchange carrier charge). With dial around products the consumer is completely in control of his or her long distance usage. With 10-10321, low volume users pay just 8¢ per minute for a long distance call over 10 minutes, and less than the price of a cup of coffee for a five minute call

(16¢ x 5 minutes = 80¢). MCI WorldCom's market research shows that over 80 percent of customers using 10-10321 or 10-10220 are very satisfied with the service and the cost of service, and that 50 percent are even more satisfied after receiving the bill.

MCI WorldCom recognizes that consumers' needs vary, and that, while low and zero usage customers exist in all income groups, certain customers whose long distance telephone usage is restricted due to income or disability may need assistance. In 1997, a full two years before this docket was initiated by the Commission, MCI WorldCom developed "MCI Family Assist" for qualified Lifeline customers. Customers qualifying for MCI WorldCom's "MCI Family Assist" can make unlimited calls on Sundays for 5¢ per minute, and are assessed a rate of only 9¢ per minute for the first 60 minutes, and 15¢ per minute thereafter, for long distance service Monday through Saturday. There are no minimum or flat fees on "MCI Family Assist" rates.

In addition, MCI WorldCom offers "MCI Distinct Savings" for customers who are deaf or hard of hearing. MCI WorldCom's "MCI Distinct Savings" allow customers to make unlimited Sunday calls for 5¢ per minute and 10¢ all other times. Like "MCI Family Assist," customers of "MCI Distinct Savings" are not assessed minimum or flat fees.

Which plan is best for the customer depends on that customer's unique calling pattern. For example, MCI WorldCom's volume calling plans ("MCI 5¢ Everyday"), may most benefit customers that want to presubscribe to a long distance carrier, and who want an easily understandable yet very competitive calling plan. If a customer determines that his or her calling pattern does not warrant the $1.95 fee associated with "MCI 5¢ Everyday," and the customer makes only a few interstate calls, the customer may choose from a variety of dial around

products. Lifeline customers might benefit most from MCI WorldCom's "MCI Family Assist" product. Other consumers might benefit most through a combination of these services. In sum, MCI WorldCom offers a range of products to its customers based on their diverse needs. There can be no question that the long distance industry is vibrantly competitive, and consequently, that consumers have many choices of providers. Plans and products now exist to serve all types of long distance customers. Long distance providers understand that, in order to maintain and grow their customer base in this competitive marketplace, they must provide consumers information, through advertising, marketing and other educational sources, necessary to make informed decisions.[12] MCI WorldCom also undertakes pro-active efforts to meet with representatives of consumer groups on a regular basis in order to provide them with information about MCI WorldCom and to provide a forum for them to advise us about issues important to their groups.

As the Commission and the public have witnessed for over 20 years, as access charges fall, so do long distance rates paid by end users. The Commission should terminate this docket, and re-direct its resources to opening up local markets and ensuring that access rates are based on forward-looking economic cost. A fully competitive telecommunications industry is the best way to serve consumers.

II. Welfare Programs Targeting Low-Volume Users Are Not Necessary

In its Notice, the Commission asks a number of questions concerning the relationship between low volume users and universal service. First, the Commission asks whether a

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[12]Through our substantial investment in mass media advertising, MCI WorldCom invites consumers nationwide to take advantage of our best calling plans through the use of identifiable celebrities.

correlation exists between income and long-distance telephone usage.[13] Most estimates of the income elasticity of demand for long distance service have found that the elasticity is slightly less than one, implying that long distance usage does not grow as fast as income. However, it appears that in asking this question the Commission wishes to know whether low volume users are also low income users.

In an affidavit attached to these comments, MCI WorldCom provides an economic analysis of two part pricing in the long distance segment. Included in the analysis is a review of publicly-available PNR data illustrating what turns out to be a very weak correlation between call volumes and household income.[14] In sum, every $1,000 increase in income produces about one minute more of long distance usage.

As the data reveals, some low volume users have high incomes, and some do not. According to the PNR Market Share Monitor Data, roughly one quarter of households in the lowest income "quintile" as defined by the U.S. Census (up to $8,800 annual income) have long distance bills of $5 or less a month. This compares to an average of 19% of households in all income groups. Even at the highest income "quintile" (with a mean income of $122,000 annually), 13% of households have long distance monthly bills of $5 or less. [15] Clearly, low usage (less than $5 per month) is not considerably more common at low incomes than at high incomes. Most importantly, even a representative customer (i.e., average) from the lowest

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[13]Notice at para 19.

[14] "An Economic Analysis of the FCC's Notice of Inquiry on Flat Rate Charges in the Long Distance Industry," George Ford, Senior Economist, MCI WorldCom, September 22, 1999.

[15]Ford Report at Table 1.

income group will benefit from the restructuring of rates in the long distance industry. According to the PNR data, the average long distance monthly bill of households in the lowest income group is $21 with total minutes of 123.[16] At this quantity of usage, the average low-income household will benefit from the restructuring of long distance rates.

The Commission proceeds to ask a number of questions about the possibility of extending universal service support to long distance usage. First, the Commission asks whether the concept of universal service should include some amount of affordable interstate interexchange service for low-volume users.[17] Support for universal service has been justified historically on the grounds that telephone service is necessary to provide access to emergency services; people need to be able to summon a doctor or ambulance in an emergency. These emergency calls are local calls. Using the traditional arguments supporting a universal service public policy, there appears to be no basis to support long distance rates through a universal service fund.

Assuming that policymakers could find some rationale for supporting long distance pricing through a universal service vehicle, the regulatory task ahead would be substantial. The Commission is very far from being able to specify how much support is needed. The Synthesis Model on which the Commission currently proposes to base universal service support is a model only of local service costs. To determine how much support is needed for long distance service would require development of a new cost model, and would likely be a very time-consuming and

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[16]The bill includes all charges, including taxes.

[17] Notice at ¶19.

contentious process.[18]

In addition, there is some limit on the amount of universal service support that the telephone system can sustain. There is currently over $4 billion of federal support for high cost, low income, schools and libraries, and rural health care users embedded in rates for telecommunications services, with additional money being recovered in state plans. In some states, residential customers face combined federal and state universal service fees of 10 percent added to their bills. This is before the Commission completes its current work to determine non-rural and rural high cost support. The Commission should exercise caution in proceeding down the path of viewing universal service as an infinitely expandable mechanism to fund subsidies that are not strictly required by the Telecommunications Act.

The Commission next asks whether the definition of "affordability" under section 254 should allow a customer who ordinarily makes few long-distance calls to avoid minimum use charges or unreasonably high usage rates.[19] It is hard to understand how a rate structure issue can result in "non-affordability." If the true cost - including network, billing, account maintenance, overhead, and other costs - of serving a customer who makes 10 minutes of calls a month is $3.50, it does not make the service more affordable if the customer is charged $0.35 a minute with no minimum fee than it would be if the customer were charged a $3.00 monthly fee and $0.05 per minute.

Affordability does not justify the Commission requiring the IXC to waive either the

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[18]There are additional issues the Commission would also have to address, discussed infra.

[19] Notice at ¶19

minimum charge of $3.00, or the $0.35 per minute charge, depending on the manner in which the IXC has decided to structure its rates, because that would ensure that the rates charged the consumer do not recover the costs of serving her. The Commission's only recourse is to make a finding that such rates are "not affordable," and therefore deserving of universal service support.

To do so, however, there are a number of steps the Commission would first have to take under the Telecommunications Act of 1996. First, it would have to alter the definition of services eligible for support, possibly after referral to the Joint Board.[20] Then it would have to determine what the "'affordable" long distance rate level would be, and how each type of rate plan offered by IXCs compared to that affordable rate. Finally, the Commission would have to decide that no affordable plan exists among all the long distance plans and rate structures that are available to consumers. If even one rate plan or structure were affordable, consumers who were not purchasing that plan must be doing so because they receive some greater value from the higher priced plan, for which they are willing to pay more. It would be bad public policy to subsidize these customers when an alternative plan is available that the Commission determined is affordable.

The Commission also suggests that lowering off-peak access charges or implementing capacity-based access charges might serve to ameliorate some of the concerns regarding low-

[20]Section 254(a)(1) required creation of a Joint Board that would recommend the initial services to receive universal service support. Section 254(c)(2) grants this Joint Board authority to recommend changes in the definition of services that receive support. Although the Act does not appear to require that the Commission refer such a determination to the Joint Board, as a practical matter, such a referral would probably have to be made in order to ensure that other universal service plans were not adversely affected.

volume users.[21] It is not clear that this would be the outcome of those two moves. First, reducing off-peak access charges would address low-volume users only if they made their few calls in off-peak times, for which there is no guarantee. Similarly, the introduction of capacity-based access charges, might indeed result in lower per minute rates, but would also likely result in higher minimum charges.[22] While competition in the long distance market would require any restructuring of access charges to be reflected in IXC rates, it is not clear that such a restructuring of rates would give the result the Commission is seeking.

Further, the Commission asks whether it can and should correct any over-recovery by the IXCs of their universal service or access charge contributions (e.g., presubscribed interexchange carrier charges or PICCs) through end-user charges. No such requirement is necessary. The competitive market for long distance does not allow any such over-recovery. Thus, no such regulatory requirement is necessary.

The dollar amount that appears on an IXC charge reflects an averaging of ILEC fees based on the IXC's best estimate of the number of subscribed lines in each Commission-presecribed customer category.[23] In the case of multiline business customers, we are required by

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[21]The latter issue -- capacity-based charges -- has been raised in a Further Notice of Proposed Rulemaking in CC Docket Nos. 96-262, 94-1, and 98-157 concerning local exchange carrier pricing flexibility. MCI WorldCom expects to address its views on capacity-based charges in comments to be filed in the Further Notice on October 29, 1999.

[22]Of course, this has been the effect of the Commission's previous move to impose the capacity-based PICC charge on IXCs.

[23]MCI WorldCom notes that ILECs are not universally providing adequate, much less accurate, data by customer class. As early as the fall of 1997, the Commission stated that it was the ILECs' obligation to provide this information to IXCs for the purpose of allowing IXCs to audit their bills and understand the charges assessed to them. Access Charge Order in CC

law to average ILEC state-specific charges into a national average rate.[24] In the case of consumer charges based on the presubscribed carrier charge, MCI WorldCom averages primary and nonprimary line costs together to derive a single rate element. It is completely incorrect to assume that the differential between a particular ILEC charge based on a particular line, and an IXC fee charged to its customer is an "overcharge" by the IXC. Moreover, the existence of substantial competition in the interexchange segment exerts competitive discipline on all rates charged by long distance providers, including flat fees. In this environment, there is no danger of "overcharging" that requires re-regulation of an entire industry segment.

The Commission also asks whether it can, consistent with the objectives of universal service and access reform, prohibit IXCs and LECs from recovering charges associated with those reforms through flat charges, or require any such recovery to be on a percentage basis that mirrors the manner in which the contributions are assessed upon the carriers.[25] This question has the issue precisely backwards. Cost recovery of such charges should, and in a competitive

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Docket No. 96-262, Second Order on Reconsideration, 12 FCC Rcd at 16606, 16610 (1997). Several ILECs have recently deferred (again) the capability of delivering customer class information, while other ILECs who do provide it are providing inaccurate data. In this environment, MCI WorldCom has attempted to ensure that it is recovering its costs, while juggling the possibility of back-billing by the ILECs. MCI WorldCom urges the Commission to re-examine this issue with the specific purpose of requiring the ILECs to comply with its orders.

[24] 47 U.S.C. Section 254(g). In addition, IXCs have high uncollectible rates and customer service costs that are reflected in charges, like the multiline business National Access Fee and PIC-C, and which are a legitimate costs of doing business. These costs are generally reflected in all long distance rates. This is nothing new. By way of comparison, no one could seriously argue that the per-minute interstate access rate should be the equivalent of a per minute long distance rate.

[25] Notice at ¶19.

market will, reflect how the costs are incurred. Thus, in the competitive long distance market, PICCs will be recovered on a per line basis, and USF will be recovered on a percentage basis, as is shown by the recovery structure the IXCs have adopted. What the Commission must do is to ensure that the charges to IXCs are cost-based and that the structure of the rates is cost-causative, and the market will then ensure that consumers will be faced with the most efficient rate structure.

Excessive ILEC access charges ultimately hurt consumers. As will be discussed, infra, the Commission has tolerated overpriced interstate access rates for too long. Whether this issue is evaluated on a macro level (ILEC access charges priced billions of dollars above cost) or a micro level (overpriced Line Item Database charges or overpriced Billing Name and Address charges), the pricing of interstate access acts as a dead weight on the entire long distance market.

Finally, the Commission asks whether it should create additional protections for low-volume residential consumers akin to the current Lifeline program for low-income consumers of local service.[26] Such a move would be a major, costly, and unnecessary expansion of the Commission's already extensive subsidy programs for local service. The Lifeline program was adopted when the Commission adopted its current Subscriber Line charge recovery of common line costs, in order to reduce the effect on low income consumers of this cost restructure. As the Commission notes in its Notice, several IXCs have tariffs in effect that waive minimum or universal service fees for low income consumers that qualify for the Lifeline plan. It is also worth noting that the IXCs do not receive any subsidy money to pay for these fee waivers; they

[26] Notice at 23.

come out of the IXCs revenues. While long distance carriers might welcome the enrichment of their bottom line that would result from being reimbursed for this waiver, it seems unwise policy to expand the subsidy to include low volume users beyond those that qualify for the Lifeline program. Just as the Commission's current universal service plan subsidizes high cost lines in some high income areas, support for low volume users might result in subsidies for high income consumers who just happen to make few calls. No expansion of the Lifeline program to subsidize low usage customers is necessary.

III. Two Part Pricing of Long Distance Services Is Consistent With Commission-Stated Goals

The Commission's dual goals of Access Reform were to 1) establish an economically rational cost causative pricing scheme and 2) reduce the implicit subsidy from high to low usage customers.[27] The Commission determined that cost causation requires that the prices of telecommunications services reflect both the manner in which cost are incurred and the level of such costs. Cost causative pricing is desirable because it eliminates "inefficient and undesirable economic behavior."[28] The Commission adopted a two-part access pricing structure -- including a flat, monthly presubscribed PICC and usage sensitive charges for originating and terminating access – after concluding that "[b]ecause the cost of using the incumbent LEC's common line does not increase with usage, the costs should be recovered through flat non-traffic-sensitive

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[27] Access Charge Reform Order at ¶36. "An important goal of this Order is to increase the amount of fixed costs recovered through flat charges and decrease the amount recovered through variable rates."Id. "In this Order, we reshape the existing rate structure in order to eliminate significant implicit subsidies in the access charge system."Id.

[28] Notice at ¶5

fees."[29] In other words, the mere option of making a local or long distance call has a cost, whether or not a call is ever made.

Given the change in the structure of access charges, it should hardly be surprising that the long distance industry has passed the PICC on to the retail bill. Imposition of the PICC made IXCs the "collection agent" for fixed ILEC loop costs. When these costs were recovered in per-minute Carrier Common Line (CCL) charges, the costs could be hidden by being embedded in the per minute long distance rates. However, when the Commission required the ILECs to assess PICCs, IXCs were faced with a flat, fixed cost per customer that they had to recover in whatever manner the market would allow. Given that it was a fixed cost facing the long distance industry, it made rational economic sense to develop pricing that would pass on these charges in the form of a flat charge.

The long distance industry has changed significantly since MCI first began offering point-to-point long distance service between Chicago and St. Louis in 1972. At that time, customers were required to dial additional numbers, services and geographic reach were limited, and fixed costs such as advertising were limited. Today, long distance products have evolved from basic voice services to a suite of products, including options such as calling plans, calling cards, personal 800 numbers, partner benefits (i.e., airline miles programs), billing options, payment options, etc. Long distance carriers now spend millions of dollars annually on national advertising and marketing campaigns, and employ multilingual customer service representatives that are available 24 hours a day, seven days a week. Even fifteen years ago, none of this

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[29] Access Charge Reform Order at ¶54.

existed. Today, customers demand a much higher level of service, and that has changed the cost structure of the industry. Over the years Federal and state governments have also implement new charges and fees to support a range of programs and objectives.[30] These charges are typically assessed on revenue billed, not on revenue collected. Therefore, carriers must pay these fees even though they did not receive payment from customers.

The Commission's second goal -- eliminating the "significant implicit subsidies in the access charge system" -- is also accomplished with this more efficient, cost causative pricing structure.[31] The "significant implicit subsidies" were a consequence of recovering "many fixed costs through variable, per-minute access rates."[32] Use of per minute rates to recover non-traffic sensitive costs resulted in the residual of revenues over costs from the higher volume users subsidizing the revenue shortfall from lower volume users.

The most important ingredient in the attenuation of the "inefficient and undesirable behavior" caused by the former access charge regime is for the IXCs to flow through the two-part pricing of access charges to consumers in the form of a two-part pricing for long distance services. If the Commission's Access Reform is to render its intended benefits, then the Commission should commend, not condemn, the two-part pricing adopted by the IXCs to recover the non-traffic sensitive costs incurred by the IXCs. Only if the IXCs reflect the access cost structure in their rates to end users will these end users make economically efficient decisions based on the cost of providing them service.

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[30] Although access, and therefore rate per minute, continue to decline, Federal and state mandated charges continue to grow.

[31] Access Charge Reform Order at ¶36.

[32] Id.

Two-part pricing is entirely consistent with a competitive outcome. Any competitive firm that lowers flat fees and raises usage rates to subsidize low volume users, or that raises flat fees and lowers usage rates to subsidize high volume users, will lose customers to rivals with more cost-based pricing structures.[33] Additionally, competitive firms will not serve customers whose revenues fall short of costs.[34] Thus, regulation that prohibits flat fees to recover fixed costs will create an entire class of under served or un-served customers. These conclusions are presented in economic terms in the attached affidavit.

IV. Commission Should Terminate This Docket and Direct Its Resources To Important Competitive Issues

As is noted above, two part pricing of long distance services not only is cost causative and economically efficient, but leads to benefits for consumers in all income categories. Similarly, access reductions, as noted by Wall Street analysts, have enabled IXCs to reduce rates for long distance services paid by end users, of all usage levels. As has been discussed above, there is no "market failure" requiring regulatory intervention. Consumers benefit from the pricing structures that currently exist in the market, and consumers have dial-around options

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[33] This results from the phenomenon well known in the economic literature as "adverse selection." Adverse selection would occur in the following circumstances. First, an IXC who charged high usage rates and low (or no) fixed monthly fees in order to cover his costs would tend to attract low, i.e., below average, usage customers. However, the revenue from these customers would not cover the costs of serving them. Alternatively, high, i.e. above average, usage customers would select any carrier who charged a flat fee above the fixed cost and a per minute rate that was lower than the true per minute cost, resulting in revenue from these customers being insufficient to cover the cost of serving them.

[34] Many carriers, including MCI Worldcom, offer low income consumers specialized programs, such as "MCI Family Assist," described above.

available to them if the rate plans offered by long distance providers are not to their liking. In addition, lifeline plans are available to qualified customers.

Moreover, the concern expressed in the Notice of Inquiry, that low income or low usage customers are paying flat charges, is a concern that needs to be evaluated in light of the prices that these same consumers pay for similar services. A $1.95 monthly fee that assures a 5¢ per minute rate pales in comparison to the flat fees charged for local telephone service and cable television service. The analysis of PNR data shows that customers in the lowest income bracket (up to $8,800 annually) pay approximately a $34 cable bill each month. That translates into over $400 per year. By contrast, even if a low-volume, low-income customer is paying a $3 minimum fee, that amount on an annual basis is $36. In addition, the PNR data shows that local phone service for non-lifeline customers is only slightly less than the monthly cable bill, at $31 per month.[35] If there is no regulatory groundswell to explore these far higher charges on consumers, it is difficult to rationalize why long distance minimum charges, which recover IXCs' costs, would somehow be viewed as "unreasonable."

MCI WorldCom believes that the Commission's efforts should be focused on ensuring that vibrant competitive forces, which exist in the long distance market, develop in all telecommunications market. The largest set of issues facing the Commission today is 1) lack of local competition and 2) inflated access charges (which remain billions of dollars above economic cost) that ILECs collect from IXCs. The Commission should focus its efforts on

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[35]Recall that SS7 features, like caller ID, are priced in the local market as flat, monthly fees, starting around $3 per feature up to $9 per month or more in certain states.

opening local markets to competition, which in turn, will increase downward pressure on per minute and flat rated access charges. As the Commission has itself witnessed, the future success of local competition requires both federal policy leadership and the ability to enforce federal local competition rules. Significant work remains to be done at both the policy and enforcement levels.

As a matter of competition policy, the Commission must set interstate access charges at forward-looking economic cost in order to guarantee just and reasonable rates and reduce the ability for anticompetitive cross-subsidy. If access charges remain above cost, MCI WorldCom and other long distance carriers will be forced to subsidize carriers against which they compete (i.e., ILECs).[36] Unless the Commission reduces access to cost, ILECs will be able to use excessive access charges to solidify their control over local markets or subsidize their entry into long distance. Either outcome seriously undermines the pro-competitive and pro-consumer goals of the Telecommunications Act of 1996, and harms consumers that otherwise would benefit from increased competition.

Concurrently, the Commission should immediately act to lower individual access charges, such as line item database (LIDB), Billing Name and Address (BNA) or other query charges, to cost. ILEC LIDB and database query charges are currently many times their economic cost, and as a result, inflate the cost of popular long distance products such as calling cards, 800 services, and directory assistance. Reducing access charges to cost will fuel the downward trend in long distance rates, stimulate innovation, and increase choice in the long

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[36] IXCs are currently placed in such a situation in markets in which GTE and other independent ILECs offer long distance services.

distance marketplace.

The Commission should terminate this docket, and re-direct all of its resources to opening up local markets and ensuring that access rates are based on forward-looking economic cost. A fully competitive telecommunications industry is the best way to serve consumers.

Respectfully submitted,
MCI WORLDCOM, Inc.

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September 22, 1999

STATEMENT OF VERIFICATION

I have read the foregoing and, to the best of my knowledge, information, and belief, there is good ground to support it, and it is not interposed for delay. I verify under penalty of perjury that the foregoing is true and correct. Executed on September 20, 1999.

Don Sussman (MLB)

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CERTIFICATE OF SERVICE

I, Vivian Lee, do hereby certify that copies of the foregoing Comments In the Matter of Low-Volume Long Distance Users of MCI WorldCom, Inc. were sent via first class mail, postage paid, to the following on this 22nd day of September, 1999.

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An Economic Analysis of the FCC's Notice of Inquiry on Flat Rate Charges in the Long Distance Industry

> Although competition can bear some admixture of regulation, it cannot be combined with planning to any extent we like without ceasing to operate as an effective guide to production. [P]lanning and competition can be combined only by planning for competition but not by planning against competition.
>
> F.A. Hayek, The Road to Serfdom (1994 ed., at 48).

I. Introduction

On July 20, 1999, the Federal Communications Commission released a Notice of Inquiry (NOI) seeking comment "on the impact of certain flat-rated charges on single-line residential and business customers who make few, or no, interstate long-distance calls (¶1)." These "flat-rated charges are attributable to universal service and access charge reform (¶1)" that the Commission implemented in January of 1998. The purpose of this reform, as indicated by the Commission, was "to phase in an economically rational common line rate structure ... and to reduce the support burden on high-volume long-distance and business customers (¶1)." Although the Commission lists its "primary focus" as being on the consequence of its own policy reforms, it also inquired about the impact on consumers of flat monthly account maintenance fees charged by some interexchange carriers (IXCs) to customers with zero or low usage.

The Commission's interest in low-volume long distance users stems from its desire to "ensure that all Americans benefit from a robust and competitive communications marketplace (¶1)." Prior to implementation of Access Reform, flat charges for long distance services were atypical and consumers had grown accustom to usage based pricing alone. Because a change from usage only pricing to usage pricing plus a flat monthly fee (two-part pricing) may increase the monthly charges for low-usage customers -- and unambiguously increase monthly charges for zero usage -- the Commission is concerned that its Access Reforms will not benefit low-volume users of long distance service.

The Commission's desire to see "all Americans benefit from a robust and competitive communications marketplace" has little to do with the recent changes in local and long distance prices that are the subject of its NOI. The distributional consequences of Access Reform will (likely) be very different from those of increased competition in telecommunications markets. Moving from pure monopoly to a competitive market would be expected to benefit all consumers,

but altering the price structure of a regulated monopoly with the intent to eliminate subsidies would not. Furthermore, while regulated monopoly is fertile ground for politically desirable subsidies, competitive markets are not. In the subsidy-rich local exchange telecommunications market, it will be nearly impossible to alter the status quo, even in the direction of increased competition, without some consumers paying more.

Indeed, the Commission fully understood that its Access Reform would benefit "most" but not "all" consumers ["the Commission believed that ... most consumers would enjoy benefits in the form of lower long-distance rates, and that those benefits would outweigh the burden of a small, flat monthly charge (NOI, ¶10, emphasis added). Increased expenditures by some consumers -- in particular zero and low-usage consumers -- was necessary to achieve the goals of the reform and, as such, is no cause for alarm. Alternatively, a thoughtful review of Access Reform may be desirable if the intended consequences of the reform have the unintended consequence of being excessively burdensome to the nation's poorer households. This issue, among others, is considered in this report.

The conclusions of this report can be summarized as follows. First, if the Commission intends to accomplish the stated goals of Access Reform, then the Commission must embrace two-part pricing and the consequences of such pricing on low-usage consumers. Two-part pricing for local and long distance service is the only way by which to ensure economically efficient pricing and eliminate implicit subsidies in the local and long distance telecommunications industries.[1] Furthermore, because of the nature of costs in the telecommunications industry, a move to two-part pricing is an inevitable consequence of more competitive telecommunications markets. If the Commission were to stand-in for competition as a welfare maximizing social planner, the result would be the same. In general, cost-causative prices are welfare maximizing and this holds (in many cases) even if the welfare of low-usage consumers is weighted more heavily than high-usage consumers and if network and call externalities are present.

Second, evidence presented in this report indicates that Access Reform and the recent developments in the competitive long distance industry do not solely benefit high-income consumers, but also benefit the nation's poor. Some consumers, no doubt, will pay more under two-part pricing. Paying more is not a consequence of income, however, but of usage and low-usage is nearly as common at high incomes as it is at low incomes. Furthermore, when coupled with

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[1] The focus of this report is on the correct structure of access charges. A separate issue is the level of access charges, an issue that has significant welfare consequences.

numerous private and public programs for low-income consumers, the consequences of Access Reform and the recent developments in the long distance industry are inconsequential on fairness grounds.

II. Background and Framework

Given the nature of costs in the local and long distance industries, two-part pricing (flat fees plus usage fees) has many beneficial features over usage based pricing. As recognized by the Commission in its Access Order and NOI, two-part pricing a) eliminates "inefficient and undesirable behavior" by making the price structure more "cost-causative" and b) reduces the "implicit subsidy" from high volume to low volume users. Oddly, one of the benefits of two-part pricing is also its most undesirable property. By reducing or eliminating "implicit subsidies," two-part pricing requires that some consumers' expenditures rise while others' fall.

1. EXPENDITURES

Figure 1 illustrates the expenditure consequences of different price structures on consumers of varying usage levels. Monthly expenditures for a telecommunications service can be written generally as

$$e = r + p \cdot q \tag{1}$$

where e is total expenditures, r is a fixed monthly fee, p is a usage rate charged for each of q units of service consumed. With usage-based pricing, the fixed monthly fee is zero ($r = 0$) and expenditures depend only on the usage price and quantity consumed. Usage based pricing is illustrated in Figure 1 by the line labeled **0X**, the slope of which is p. At zero usage, monthly expenditures are zero ($p \cdot 0 = 0$).

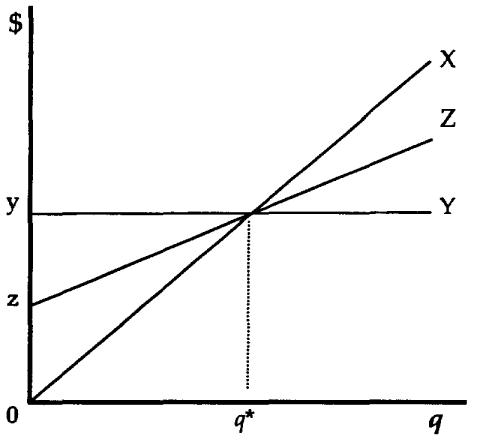

FIGURE 1.

Flat-fee pricing, alternatively, has a usage price of zero ($p = 0$) and monthly expenditures are equal to the flat monthly fee ($e = r$). Expenditures are invariant to the quantity consumed as illustrated by the horizontal line labeled **yY** in Figure 1 where the fixed monthly fee is equal to **y**. In contrast to usage-based and flat-fee pricing, two-part pricing (as defined here) entails both a non-zero monthly fee and usage rate.[2] Line **zZ** in Figure 1 illustrated on two-part pricing plan with a fixed monthly fee of **z**. The usage price is the slope of line **zZ**.

To illustrate the impact of alternative pricing structures and usage on monthly expenditures, the three lines in Figure 1 are drawn such that monthly expenditures are equal for all three pricing structures at quantity q^*. If usage is below q^*, the most expensive price structure is flat-fee pricing (**yY**) and the least expensive is usage-based pricing (**0X**). Alternatively, at quantities exceeding q^* the most expensive pricing is usage-based pricing and the least expensive is flat-fee pricing.

Clearly, for consumers with usage (above) below q^*, a move from usage-based pricing (**0X**) to either two-part (**zZ**) or flat-fee (**yY**) pricing will (decrease) increase monthly expenditures. With two-part pricing, high usage consumers (i.e., above q^*) are compensated for the increase in the fixed monthly fee (from **0** to **z**) by a reduction in the usage rate (holding q constant). Low volume consumers (i.e., below q^*) pay the lower usage rate, but their

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[2] Either the fee or usage rate could be negative.

consumption is not large enough to cover the increase in the fixed fee. Of course, the lines could be redrawn (p could be further reduced) such that some consumers below q^* spend less per month (holding q constant). Zero-usage consumers, however, cannot be compensated for the increased fixed fee with lower usage charges. Usage is zero, so monthly expenditures are zero with usage-based pricing and greater than zero with two-part or fixed-fee pricing.

2. COSTS

Under the "principles of cost-causation" that guided the Commission in its reform of access charges, the desirability of the pricing structure depends on the nature of costs. A naïve view of the costs of providing local access service divides costs into two categories: a) non-traffic sensitive and b) traffic sensitive costs (Access Order ¶24; NOI ¶5).[3] Per customer monthly cost is:

$$c = f + a \cdot q \tag{2}$$

where c is total cost of serving a consumer, f is a fixed monthly cost, a is marginal (or unit) cost for each of q units of service consumed. These alternative cost structures can also be illustrated using Figure 1. With zero fixed costs, the monthly cost of serving a customer is illustrated by the line labeled **0X**. Alternatively, if all costs are fixed in nature, then the monthly cost is **yY**. If both fixed and marginal cost are positive, then the monthly cost is illustrated by line **zZ**.

As recognized by the Commission, "[u]nder principles of cost-causation, it is most economically efficient for incumbent LECs to recover the costs of providing interstate access in the same way that they incur them (NOI, ¶5)." Looking back to Equations (1) and (2), the "principles of cost-causation" prescribe that r equal f and p equal a.

Alternately, if all revenues are recovered through the usage price p ($r = 0$), then price must be increased above c to p' so that usage revenues in excess of marginal cost equal the fixed cost f. Raising the usage price reduces quantity from q^* to q'. Because consumer welfare (and social welfare) is maximized when price equals marginal cost, deviating from cost-causative pricing creates "inefficient and undesirable economic behavior (NOI, ¶3)" by reducing usage to

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[3] The cost of exchange access services includes substantial non-traffic sensitive costs on account of the policy of dividing the costs of the local network between intrastate and interstate jurisdictions.

q'. The lost social welfare caused by the deviation from "cost causative" pricing is equal to the triangular area **SWL** in Figure 2.

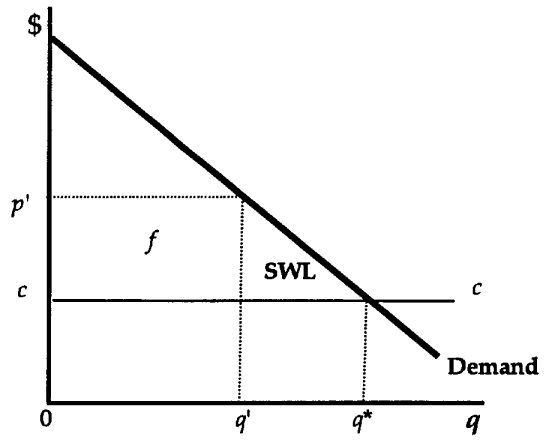

FIGURE 2.

In some cases, a consumer's demand may not be large enough so that increases in p produce enough residual revenue to cover f. If the consumer is to receive service, then a subsidy is required. Thus, deviations from cost-causative pricing not only produce social welfare losses, but can also create implicit subsidies. The "implicit subsidy" from high to low usage consumers produced by the pre-Reform access price structure is illustrated in Figure 3. The cost of serving customers with a given usage q is illustrated by the line labeled $c = f + aq$. Under a usage-based pricing, the expenditures of a customer are measured by the line labeled $e = pq$. Observe that expenditures are sufficient to cover costs only if the customer's usage is at least q^* where $q^* = f/(p - a)$. Those customers with usage (below) above q^* spend (less) more for the service than it costs to produce. The implicit subsidy is apparent; the level of p must be set so that the losses from serving customers that consume below q^* (the triangle labeled X) are offset by the profits from serving customers that consume above q^* (the triangle labeled Y): high-volume consumers subsidize low-volume consumers. Eliminating this "implicit subsidy" requires that r equal f and p equal a, a price change that results in increased expenditures for consumers with usage below q^* units and decreased expenditures for consumers with usage above q^*. As long as there are fixed cost f, it is not possible to eliminate the implicit subsidy without some consumers (zero users in particular) paying more.

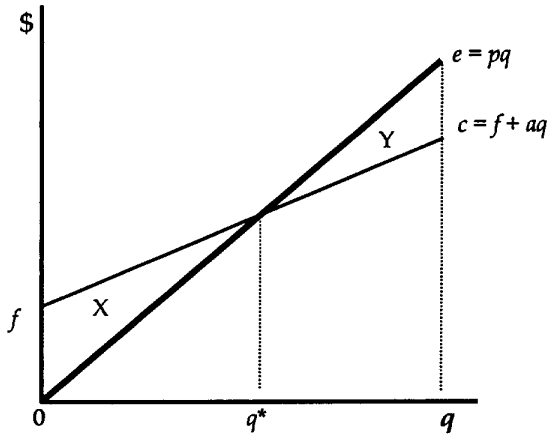

FIGURE 3.

3. THE DUAL GOALS OF ACCESS REFORM

Recall that the Commission's dual goals of Access Reform were to 1) establish an economically rational "cost causative" pricing scheme and 2) reduce the implicit subsidy from high to low usage customers. There is only one way to accomplish these two goals simultaneously. Cost-causation (Goal 1) suggests that r should be set equal to f and p set equal to a. By doing so, the price structure exactly mirrors the cost structure. As long as f is positive, then two-part pricing is preferred to a usage-based pricing even if expenditures for some consumers increase. Elimination of the implicit subsidy (Goal 2) also requires that r should be set equal to f and p set equal to c. By doing so, the expenditures of each consumer exactly match the cost of service and there is no need for a subsidy. Again, to eliminate subsidies, some consumers will pay more while others will pay less.

Critical to the elimination of "inefficient and undesirable behavior" and "implicit subsidies" is that the IXCs flow through the two-part pricing of access charges to consumers in the form of a two-part pricing. The "inefficient and undesirable behavior" caused by the pre-Reform access structure is a consumption issue, and consumption is determined by final goods prices (Access Order, ¶30). Thus, altering access charges that IXCs pay does not provide a remedy; consumers must face the more economically rational price structure as well. Additionally, exchange access is an input into the production of long distance service and as

Ordover and Panzar (1980) show, the two-part pricing of inputs is socially inefficient unless the final goods are priced in the same manner.[4] In fact, if the Commission's Access Reform is to render its intended benefits and not be detrimental to competition, then the Commission should laud, and not condemn, the two-part pricing adopted by the IXCs.

The fact that some consumers will pay more for access services (that are collected by IXCs) does not imply, however, that all consumers will not benefit in some way from the reform. The costs and benefits of Access Reform cannot be measured solely by the short-term changes in monthly expenditures for access and long distance services for certain classes of consumers. Rather, the benefits of the reform will flow from the continued evolution of local competition and elimination of the inefficient allocation of scarce resources in the telecommunications industry. It is the long-run consequences of policy reforms that are relevant. This long-run focus calls for careful selection of and confidence in chosen reforms. Good policy decisions should not be over-ruled at the first stages of an industry's adjustment to rule changes, even if those adjustments do not suit particular interest groups.

A common complaint regarding (the Access Reform induced) two-part pricing in long distance is that zero-usage households are paying for services they do not use (NOI, ¶4). This complaint is incorrect and no doubt a consequence of the Commission's attempt to substitute an increase in the rates paid by the interexchange industry and its customers (via the PICC) for a direct increase in local rates (via the SLC). As the Commission makes clear in its NOI (¶16), the PICC is marginal to local phone subscription, not long distance presubscription; the only way to avoid paying (a charge to recover the) PICC is to discontinue local service. The IXCs are simply the collection agents for the ILECs. When evaluating remedies for a potential policy problem, it is important to be honest about both the cause and consequence of that problem.

III. Cost Causation, Planning, and Competition

Reducing or eliminating social welfare losses is the *raison d'être* of competition. Since deviations of price from cost are the root of such losses, it is unsurprising that cost-causative pricing is entirely consistent with the (naïve) model of perfect competition. Because perfect competition maximizes social

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[4] J. A. Ordover and J. Panzar, On the Nonexistence of Pareto Superior Outlay Schedules, *Bell Journal of Economics*, 11: 351-4 (1980).

welfare, we expect an "all-knowing," welfare-maximizing social planner would choose the same prices as determined in a competitive market. This fact can be illustrated in a straightforward manner.

Let equations (1) and (2) define the revenues and costs for a market of n identical consumers. A welfare maximizing social planner will choose r and p to maximize:

$$\max\ W = n\left[\int_{p}^{\infty} q(s)ds - r\right] \quad \text{subject to } \pi = 0 \tag{3}$$

where W is consumer welfare and $\pi = (p-a)q(p) + (r-f)$, the profit of the firm.[5] The first order conditions of the Lagrangian optimization problem are

$$\frac{\partial L}{\partial p} = -q(p) + \lambda[q + (p-a)q'] = 0. \tag{4}$$

$$\frac{\partial L}{\partial p} = -1 + \lambda = 0. \tag{5}$$

Solving equation (5) for λ and inserting into equation (4) shows that $p = a$ at the social welfare maximum. Clearly, if $p = a$ and $\pi = 0$, then it must be the case that r equals f. The welfare maximizing social planner chooses cost-causative prices.

Competition has no respect for the desires of social planners.[6] Thus, it is important to compare the competitive outcome to that of the social planner. In this case, the competitive firm chooses r and p subject to the condition that long run profits are zero. There are an infinite number of r and p combinations that can result in zero profit and these (r, p) combinations make up the iso-profit curve. Likewise, the iso-welfare curve summarizes the relationship between r and p for a fixed level of welfare. The slope of the iso-welfare curve in (p, r) space is

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[5] Marginal cost is assumed to be constant.

[6] This lack of respect is particularly true of real world planners not intent on maximizing social welfare.

$$\left.\frac{\partial r}{\partial p}\right|_{\Delta W=0} = -q(p)$$

the slope of the iso-profit curve in (p, r) space is

$$\left.\frac{\partial r}{\partial p}\right|_{\Delta \pi=0} = -q\left(1+\eta\left(\frac{p-a}{p}\right)\right)$$

where η is the own-price elasticity of demand. Suppose that the prices chosen by existing competitive firms were such that an entrant could offer a different set of prices that made all consumers better off (a Pareto improvement). Clearly, this initial set of prices would not be a competitive equilibrium since entry will occur and prices will change. Thus, at the zero profit competitive equilibrium it must be true that

$$\left.\frac{\partial r}{\partial p}\right|_{\Delta W=0} = \left.\frac{\partial r}{\partial p}\right|_{\Delta \pi=0}$$

implying that p must equal a and r must equal f. Deviations from cost-causative prices are not sustainable, since Pareto improvements can occur. For example, if price is below marginal cost ($p < a$) then a Pareto improvement can be made by increasing p and reducing r because

$$\left.\frac{\partial r}{\partial p}\right|_{\Delta W=0} > \left.\frac{\partial r}{\partial p}\right|_{\Delta \pi=0}.$$

Alternately, if price is set above marginal cost ($p > a$), then reducing p and increasing r is a Pareto improvement because

$$\left.\frac{\partial r}{\partial p}\right|_{\Delta W=0} < \left.\frac{\partial r}{\partial p}\right|_{\Delta \pi=0}.$$

Thus, the choice of p and r by the social planner is the same as that of the competitive market.[7] There have been a number of academic papers evaluating

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[7] There may be situations where competitive forces will cause prices to deviate from costs even holding profits at zero. For example, consumers may have strong preferences for flat fees rather

the social planner's choice of tariffs under a variety of more complex conditions. Richard Schmalensee, for example, considers the choice of prices by a welfare-maximizing social planner who differentially weights consumer and producer surplus.[8] William Sharkey and David Sibley evaluate the social planner's choice of prices when the utility of low volume and high volume users are weighted differently.[9] Michael Einhorn considers optimal tariffs in the presence of call and network externalities.[10] While all of these papers evaluate the tariff selections of "all-knowing" social planners rather than the outcomes of a competitive process, each of these papers shows that two-part pricing is entirely consistent with the choices of the welfare-maximizing social planner.[11]

It is important to keep in mind that as a practical matter neither competition nor regulation is as clean or efficient as mathematics. Decades of economic research on regulation indicates that competition is vastly superior to regulation at improving market performance and maximizing social welfare. As Milton and Rose Friedman acknowledge:

> Perfection is not of this world. There will always be shoddy products, quacks, con artists. But on the whole, market competition, when it is permitted to work, protects the consumer better than do the alternative government mechanisms that have been increasingly superimposed on the market.[12]

The Telecommunications Act of 1996 clearly recognizes the superiority of competitive forces, calling for increased competition and less regulation.

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than usage charges or there may be strong complementarities between the multiple products a firm sells. Competition, not regulation, is ideally suited to decipher such preferences.

[8] Richard Schmalensee, Monopolistic Two-Part Tariff Arrangements, *Bell Journal of Economics*, 12: 445-66 (1981).

[9] Other price structures may be chosen if more than one tariff can be offered. Whatever the tariff structure, low usage consumers will always pay a higher average revenue per minute. William w. Sharkey and David s. Sibley, Optimal Non-linear Pricing with Regulatory Preference Over Customer Type, *Journal of Public Economics*, 50: 197-229 (1993).

[10] Michael A. Einhorn, Biases in Optimal Pricing with Network Externalities, *Review of Industrial Organization*, 8: 741-746 (1993).

[11] For a general discussion of these topics, see Bridger Mitchell and Ingo Vogelsang, *Telecommunications Pricing: Theory and Practice*, Cambridge: Cambridge University Press (1991).

[12] *Free to Choose* (1980), p. 222.

IV. Minimum Charges by IXCs

The Commission's stated desire to see that the "principles of cost-causation" direct pricing decisions certainly would be expected to extend beyond exchange access services (and the recovery thereof) into other telecommunications markets including the long distance industry. Like access services, the cost of serving long distance customers includes both traffic sensitive and non-traffic sensitive costs. Among the largest of traffic sensitive costs are switched access charges. Other traffic sensitive costs may be related to network congestion costs and customer incentive programs such as free airline miles. Examples of costs of a more fixed (per customer) nature include advertising, customer acquisition, billing and collections, customer service, computer systems, administrative expenses, product development, among others. Most of these costs are invariant to the usage of any particular customer, but rise with the total number of customers. Thus, a two-part pricing for long distance service is entirely compatible with Commission's perception of economically rational price structures.

The rather small monthly flat and minimum fees levied by many IXCs today of $3 to $5 remain below reasonable estimates of the fixed cost of serving a customer.[13] For example, one industry analyst estimates that customer acquisition costs are approximately $100 to $150 per customer. Given a customer life of 24 months -- perhaps too long for the long distance industry -- the monthly payment to recover those costs will be $4.16 to $6.26.[14] Publicly available estimates of billing and product development costs alone exceed $3 per month.[15] These few examples of fixed costs show that the fixed fees and minimum usage rates remain below the true fixed cost of serving a customer.

While estimates of the fixed cost per customer can indicate the general level of such costs, in the end it will be competitive forces will decipher whether or not a fixed fee is too low or too high. If one carrier's fixed charges are too high,

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[13] Minimum usage is slightly different from the two-part pricing structure discussed earlier. In fact, minimum usage is a usage-based pricing structure with a minimum expenditure. If price times quantity is less than the minimum usage amount, then total expenditures equal the minimum usage amount. If price times quantity exceeds the minimum usage amount, then total expenditures equal price times quantity. At any non-zero level of usage, minimum usage fees will always underestimate the contribution of the customer to fixed costs since marginal costs are incurred in the provision of service.

[14] "For Whom, the Bells' Toll?," Bernstein Research, February 1997.

[15] Enduring Local Bottleneck II (Hatfield Associates, 1997) estimates product development and sales expenses to be $1.72 per month. The HAI Cost Model (5.0) estimates bill rendering and customer service costs to be $1.37 per month.

(marginal) customers simply will migrate to a carrier offering a better deal. Price competition is intense in the long distance industry and information on prices is readily available through a variety of advertising outlets. Long distance carriers are not shy about price comparisons and consumers are not reluctant to switch. Thus, there is no need for the Commission to micromanage pricing in the competitive long distance industry. The advantages of competitive markets over regulation are many, but most relevant to this discussion is that even if fees or prices exceed cost at any given moment, rivalry among firms ensures that there are forces at work to eliminate excessive profits by bringing prices in line with costs. These competitive forces are self-activating and self-enforcing, requiring neither regulator recognition of a problem nor lengthy regulatory proceedings riddled with the private interest of regulated parties to achieve the intended results.

V. Income and Usage

In its NOI, the Commission asks numerous questions about the "correlation between income and usage" and the potential need for "universal service" or "welfare" programs for long distance services. As mentioned above, (subsidized) low usage customers will, by necessity and design, pay more (per minute on average) for network access as a consequence of Access Reform. Potential problems arise only if low usage is synonymous low income, so that Access Reform might be interpreted as being excessively burdensome on the nation's poor. To address this issue, the relationship between income and usage is evaluated using PNR's *Market Share Monitor* database. This product is the only publicly available database containing information on usage and income.[16] A data set of household bill information for local, cable, and long distance expenditures and usage during 1997 is constructed from the PNR data (18,942 observation for long distance, 11,152 observations for local and cable).

Correlation can be measured in a number of ways. For example, a simple correlation coefficient (ρ) is a measure of the strength and direction of the linear relationship between two variables. Positive correlation indicates that the variables move in the same direction, while negative correlation implies the opposite. Perfect positive correlation is indicated by $\rho = 1$ and perfect negative correlation by $\rho = -1$. If two variables are positively (negatively) correlated, then $\rho > 0$ (< 0). If the two variables are not correlated at all, $\rho = 0$. The choice of

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[16] While the representativeness of the data may be questioned, it is the only publicly available database of long distance bills for which I am aware.

"strong" correlation is somewhat arbitrary, but values lying between -0.6 and 0.6 are typically interpreted as having low or weak correlation. For the PNR data, the correlation between the total minutes and income or total expenditures and income is about $\rho = 0.14$, indicating a positive but very weak correlation between usage and income.[17] This low correlation is consistent with estimates of the income elasticity of demand for long distance services (i.e., the percent change in quantity divided by the percent change in income). Numerous studies have estimated the income elasticity for long distance service and, in nearly every case, the income elasticity for toll services is found to be less than unity (Taylor 1994, Ch. 6, Appendix 1 and 2).[18]

Another test of the relationship between income and usage is to compare the mean usage across income groups. For this test, we compare the mean usage levels between income quintiles of U.S. households. In Table 1, the mean incomes of each quintile are presented. Three usage statistics from the PNR data are provided for each quintile: a) the average long distance bill; b) the average minutes of usage; and c) the percent of bills less than $5. All three usage statistics indicate a positive, but weak, relationship between income and usage. For example, while income rises by about 150% between quintiles 1 and 2, minutes increases by only 15%. Similarly, income increases by 113% between quintiles 4 and 5 and usage increases only by 21%. Low usage (defined by bills less than $5) is common at all income levels and is only slightly more common at low incomes that at higher incomes. For example, 19% households in the second quintile and 16% of households in the fourth quintile have long distance bills less than $5. Average revenue per minute is not considerably different across income quintiles.

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[17] Using Fisher's *z*-test, the bounds of the correlation coefficient are determined to be about 0.13 to 0.15. The simple correlation coefficient between income and local phone charges is ($\rho = 0.13$) and between income and cable service is ($\rho = 0.10$).

[18] Lester D. Taylor, *Telecommunications Demand in Theory and Practice*, Dordrecht: Kluwer (1994).

Table 1. Income, Usage, and Expenditures

	Lowest Fifth	*Second Fifth*	*Third Fifth*	*Fourth Fifth*	*Highest Fifth*	*All*
Mean Income[a]	$8,872	22,098	37,177	$57,582	$122,764	$37,005
Monthly Bill	$20.56	$23.71	$27.42	$30.34	$37.12	$27.45
Total LD Minutes	123	141	171	187	226	167
Bill ≤ $5	27%	21%	19%	16%	13%	19%
Avg. Revenue Per Minute	$0.167	$0.168	$0.160	$0.162	$0.164	$0.164
Local	$29.09	$29.63	$31.11	$33.11	$36.13	$31.86
Local (excl. local toll)	$25.44	$25.95	$26.97	$29.07	$31.73	$27.91
Cable Bill	$33.74	$35.30	$35.42	$37.82	$40.15	$36.72

[a] Source: Census Data (1997 Income) and PNR Market Share Monitor (1997).

Also included in Table 1 are the average monthly flat charges for local telephone and cable television services for each income quintile. The monthly flat charges for these services are substantially larger than those charged for long distance service as either a monthly minimum, a monthly flat charge for a two-part priced calling plan or the charges to recovery the PICC. Indeed, in light of the fact that sizeable monthly flat charges are common for communications services, the Commission's concern over the relatively trivial flat charges for long distance services should be alleviated.

The various measures of correlation between income and usage presented here suggest that while income and usage are positively correlated, long distance demand is not highly sensitive to income. Furthermore, low usage is common at all income levels indicating that low usage a poor proxy for low income.[19] Table 1 also illustrates that the $3 to $5 flat charges and minimums (or the $1 to $1.50 PICC recovery fees) in the long distance industry are trivial when compared to the fixed monthly fees of local and cable television services. Thus, the recent changes in access charges and long distance calling plans have the desirable properties of being more cost causative and not excessively burdensome on any particular income group.

[19] In the sense that the correlation is consistently positive, but the correlation is "low."

VI. Conclusions

This report shows that if the goals of Access Reform, both specifically and generally, are to be accomplished, it is necessary that the pricing structure of access services and long distance rates consist of both fixed monthly fees and usage charges. Such cost-causative, two-part pricing structures are consistent with both the stated intent of the Commission's Access Order and the general economic principles of efficient pricing. The Commission's intention to eliminate the implicit subsidies created by the pre-Reform access pricing structure will, by necessity, force some consumers to pay more. Specifically, previously subsidized consumers will pay more while previously subsidizing consumers will pay less. This consequence of Access Reform was expected, indeed inevitable, and is no cause for alarm. Any attempt to regulate away intended consequences is particularly undesirable.

In addition, this report provides some evidence on the relationship between usage and income. This evidence indicates that while usage and income are positively correlated, the correlation is weak. Furthermore, low usage (the focus of the NOI) is found to be common at all income levels suggesting that the recent changes in the industry are not excessively burdensome to households of a particular income level. Thus, Access Reform would appear to be fairly innocuous on fairness grounds.

In light of the pro-competitive, deregulatory spirit of the Telecommunications Act of 1996, the pro-regulatory nature of the Commission's NOI is discouraging. The NOI and attached comments of three Commissioners all concur that the long distance industry is substantially competitive. Price regulation in competitive markets is unnecessary and welfare reducing. Re-regulating the rates of the long distance carriers blatantly contradicts the objectives of the Act and would be a major set back for telecommunications policy. Price is the driving force of the competitive market, signaling incumbents, entrants, and consumers to allocate resources in the most efficient manner. The regulation of prices in a competitive market is perhaps the most damaging of interventions, leaving the market impotent to perform its most critical function.

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